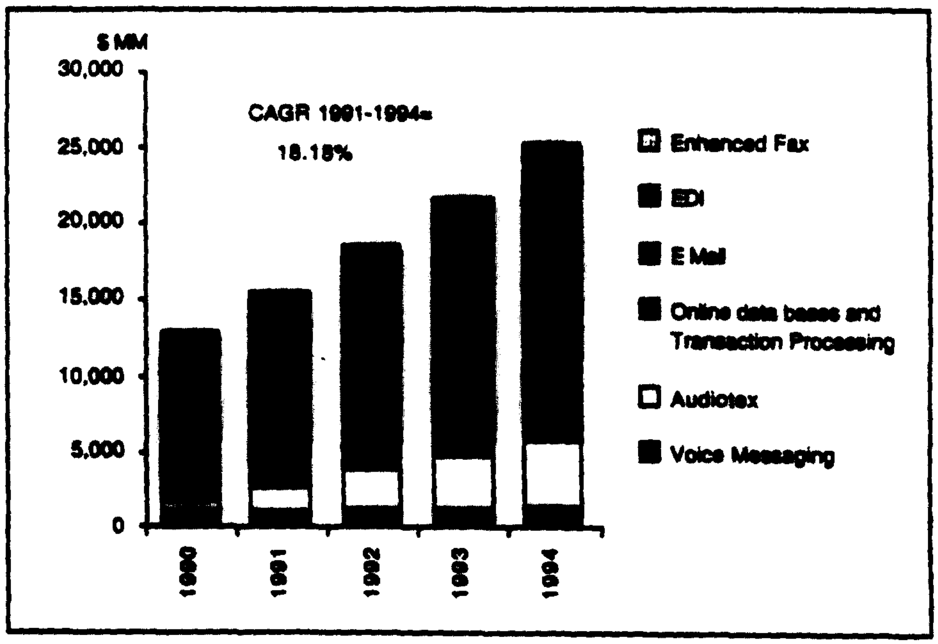
their suppliers and customers which reduces errors, decreases response times and facilitates Just in Time Processes. These services are often offered via VANS

- Enhanced Fax: this service breaks into four main applications. Broadcast fax enables users to send a fax to multiple destinations at once. Fax retrieval allows users to dial up and order information to be faxed to a fax machine that they indicate. Store and Forward capabilities allow users to send a fax even when the recipient machine is busy. The system will store the fax and attempt to resend it for several hours. Another service that is offered, sometimes in conjunction with E mail, is a fax mail box, where a fax is stored when it is received and the subscriber can download the fax from his mail box to the fax machine of his choice when it is convenient.

All these segments combined yield a market which has grown at 18% for the last three years and which is worth over $25.4BN in 1994.

EXHIBIT II.1: GROWTH IN ENHANCED SERVICE REVENUES[1]



[1] *Voice Messaging Services excludes sales of business premise equipment and Telephone Answering Devices, and also exclude wireless based Voice Messaging Services.*

USBAD (WORD) TDOO6•3/95/NY.C

Source: Frost and Sullivan, Insight Research, Goldman Sachs, Marketfinders, Booz Allen Analysis

II.2. Enhanced Service Providers

All the segments of the Enhanced Services Market are richly populated by successful players other than the RBOCs. RBOC presence in these markets has not reduced competition. In fact, they have only achieved significant penetration of one segment - voice messaging services. Furthermore, most Enhanced Service Providers in U S WEST's territory regard U S WEST as a reliable provider of basic services which enable their enhanced service offerings.

Each of the Enhanced Service segments has a large number of players. Competition is generally quite healthy but the rapid growth ensures that there are many winners in each segment. Table II.1 shows some of the major players in each segment, with market shares, where available, and recent segment growth.

TABLE II.1: ENHANCED SERVICE PROVIDERS

SEGMENT	SELECTED MAJOR PROVIDERS (MARKET SHARE WHERE AVAILABLE)	SECTOR REVENUE CAGR (1991-94)
Voice Messaging[1]	Octel, Voice-Tel, VoiceCom (5%), AT&T (<1%), MCI (<<1%), Sprint (<<1%), Scherers Communications, Envoy Global, Dial-Com, Ameritech (3%), Bell Atlantic (10%), Bell South (11%), NYNEX (4%), Pacific Bell (5%), Southwestern Bell (4%), US West (7%)	55%
Audiotex	Call Interactive, Info-access, Sherers Communications, US Audiotex	41%
Online data bases and Transaction Processing	Compuserve, Prodigy, America Online, Dialogue, Genie, Delphi, AT&T-INN, Disclosure, Dow Jones, Dun & Bradstreet, Newsnet, Reuters, Thompson, ADP, Equifax, First Data Resource, New York ACH, VISA, Deluxe Data Systems, Remittance Processing Service	15%

[1] *Shares in this segment are of Service revenues, excluding equipment sales*

E Mail	AT&T (16%), Sprint (5%), MCI/BT (5%), GEIS (11%), Advantis (1%), Compuserve, Prodigy, America Online,	22%
EDI	BT Tymnet, GEIS, Advantis, Sterling Software, Harbinger, AT&T, Sprint	17%
Enhanced Fax	AT&T (6%), Sprint (7%), MCI (7%), C&W (3%), LDDS (<1%), RBOCs (7%), Xpedite (11%), Mediatel (2%), GTE, SNET, Advantis, GEIS, Technology Solutions, PR Newswire, World Data Delivery, Instant Information, Marketfax, Actionfax	44%

Source: Insight Research, Frost and Sullivan, Marketfinders, Goldman Sachs

The RBOCs participate to some degree in nearly all these service segments, as demonstrated by the records of the Comparably Efficient Interconnection (CEI) Plans which they are obliged to file with the FCC for all Enhanced Service products that they plan to offer. They have also filed plans for several services, especially video-related ones which they are currently developing.

TABLE II.2: RBOC CEI FILINGS FOR EXISTING AND PLANNED ENHANCED SERVICE CATEGORIES

[redacted]

CURRENT SERVICES

Voice Messaging	X	X	X	X	X	X	X
Online Databases		X		X	X		X
Audiotex	X						X
Electronic Mail		X			X		
EDI	X	X	X	X	X	X	X
Transaction Processing							X
Enhanced Fax Services	X	X	X				X

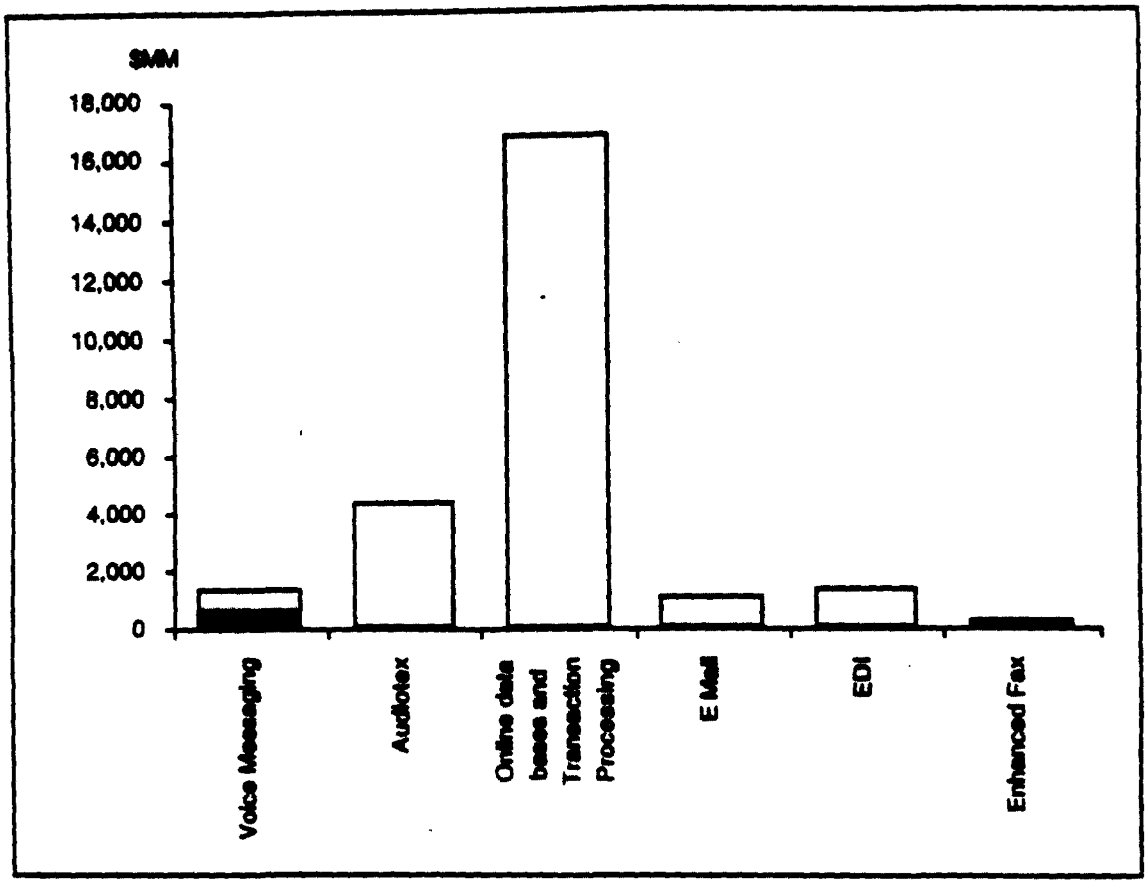
SERVICES IN DEVELOPMENT

Interactive Voice Services with Call Count		X					
Video Server		X					

Level Two Video Gateway		X		X			(X)[1]
Video & Text Programming, Interactive		X		X			X

However, RBOCs have attained very little penetration in any of the segments except Voice Messaging. This demonstrates clearly that they do not have a monopolistic position in Enhanced Services. There are many other players in each segment which are competing successfully, in many cases more successfully than the RBOCs.

EXHIBIT II.2: RBOC SHARE OF ENHANCED SERVICE MARKETS



Source: Insight Research, Frost and Sullivan, Marketfinders

The RBOC's participation in Voice Messaging and Enhanced Fax is discussed below in more detail. They have scant participation in the other Enhanced Service markets:

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[1] *In development but no CEI plan filed*

- Audiotex: The RBOCs have introduced a number of local services, including traffic information and directory services. Pacific Telesis, for example, offers a Daily Reporter service in conjunction with its voice messaging service whereby programs on topics such as sports and weather can be downloaded to voice mail boxes. The RBOCs entry, whilst still on a small scale, is helping to overcome the poor image of Audiotex services created through fraudulent and misleading activities of some players in this market

- Online Databases: RBOC participation here has also been very limited. U S WEST set up a Joint Venture with France Telecom in 1991 but it was not a success and they withdrew from the market in 1994. NYNEX also discontinued its "Info-Look" gateway after two years, and Pacific Telesis abandoned its product "California-on-line" before it was even introduced.

- Email, EDI and Transaction Processing: The RBOCs have experimented with these services, but they have not achieved significant penetration in any of them.

U S WEST holds frequent discussions with non-affiliate Enhanced Service Providers (ESPs) in its territory about its compliance with the Open Network Architecture rules (which govern the way it offers the various elements of service that are required for Enhanced Services). These rules are designed to ensure that the RBOCs own Enhanced Service businesses do not receive preferential treatment. Most ESPs regard U S WEST as a reliable supplier.

III. VOICE MESSAGING

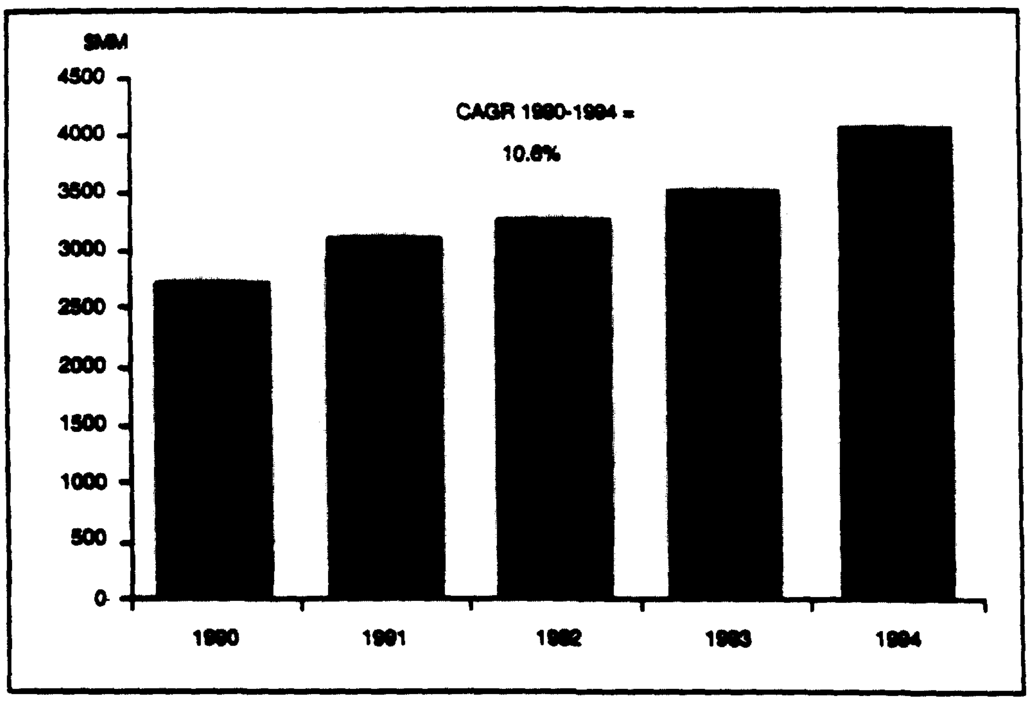
III. Voice Messaging

III.1. Market Growth

The Total Voice Messaging Market, including both equipment and services has shown healthy growth in the last few years. RBOC revenues have grown dramatically. but sales of Voice Messaging Equipment, which compete directly with Voice Messaging Services, have continued to expand as well.

The Voice Messaging Market, including sales of business premise equipment and Telephone Answering Devices, has, in aggregate, grown quite rapidly since the RBOCs entered the market, It has increased from $2.7BN in 1990 to $4.1BN in 1994. This reflects continued increases in penetration of TADs, from 35% of US Households in 1990 to 66% in 1994. It also reflects more than a doubling of the number of subscribers to Voice Messaging Services. Currently, more than 9MM people use these services, up from only 4MM in 1990.

EXHIBIT III.1: TOTAL VOICE MESSAGING MARKET (EQUIPMENT AND SERVICES)[1]



Source: Yankee Group, Frost and Sullivan, NATA

[1] *Includes: Telephone Answering Devices; Business Voice Messaging Equipment; Service Bureau,* RBOC, IXC *and Independent* LEC *Voice Messaging Service revenues*

There are different factors driving the growth by each major provider segment:

- Business VM equipment: the growth in this market has slowed to an average of 7% in the last four years (down from 52% per year between 1986 and 1990) as the market reaches saturation. Prices have also declined due to healthy competition – the largest player, Octel, has only 18% of the market. There is a trend towards integration of Voice Messaging systems with other messaging applications such as Email which will stimulate some additional growth.

- Telephone Answering Devices: partly spurred by the arrival of affordable voice messaging services from the RBOCs, TAD equipment vendors have introduced machines with significantly improved features. A switch to digital technology has increased reliability, and facilitates introduction of features such as Caller ID, multiple mail boxes, call blocking, call logs, remote notification and voice announcements. With these improvements, the only major benefit that messaging services have over TADs is the ability to take a message when the phone is busy. On the other hand, TADs allow callers to screen calls, and, they usually have a visual message indicator, which many users prefer. Consequently, TADs continue to provide strong competition to providers of VM services in the residential and small business sectors.

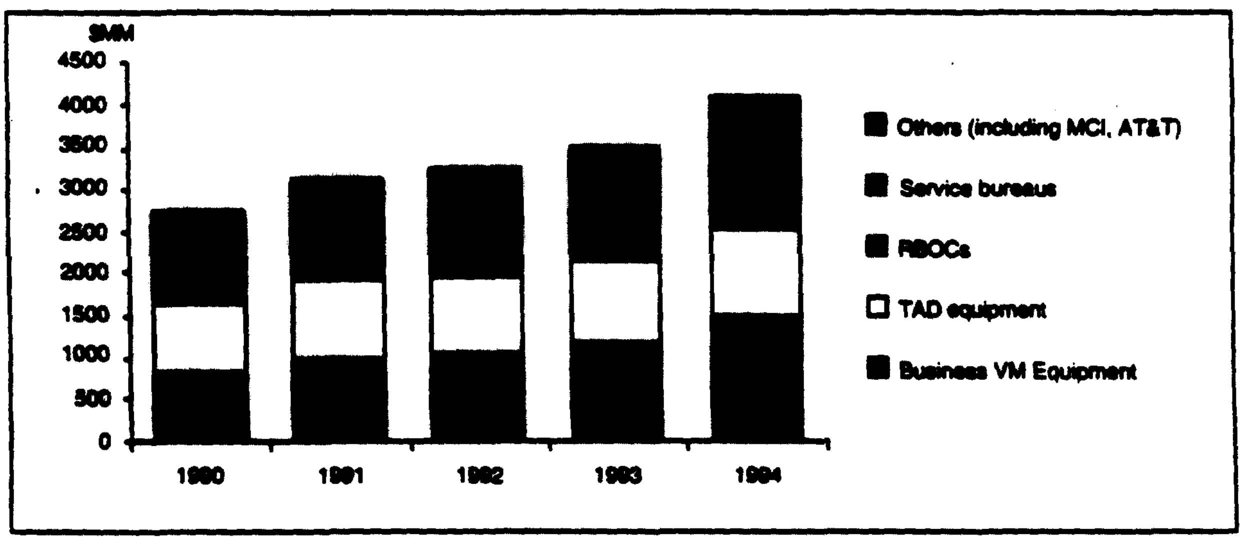
- Voice Messaging Services

  - RBOCs: The RBOCs launched voice messaging services in 1990. These services have been targeted at the residential segment. They have experienced extremely rapid growth, which reflects the fact that their services are priced substantially lower than the previously available services which were targeted at business users (see below). Nonetheless, in total lifetime costs they are still much more expensive than TADs, and consequently the number of subscribers (nearly 5MM in 1994) is small compared to the installed base of TADs (64MM in 1994).

- Service Bureaus: These have traditionally offered service to businesses. Only 10% of their revenue came from the residential segment in 1994, mainly from professional users such as doctors and lawyers. Service Bureaus were the first to offer automated voice messaging, but many also already offered live answering, which is much more costly to provide than automated voice messaging. (In 1994, about 75% of Service Bureau revenue still came from live answering).

- IXCs and Independent LECs: These players make up the tail end of the service market. The IXCs offer national voice messaging services almost exclusively to large businesses which span several regions. AT&T was the only IXC provider in the market until it dropped out in December 1993. MCI entered in 1994. Given that the IXC service was priced at a premium to local or regional services, it has been a difficult sell and MCI currently has less than 1% share of service revenues. The Independent LECs offer similar services to the RBOCs and have about 6% of the service market.

EXHIBIT III.2: VOICE MESSAGING MARKET BY VENDOR TYPE (EQUIPMENT AND SERVICES)



Source: Frost and Sullivan, NATA, Yankee Group, BAH Analysis